

ASSIGNMENT 2

Textbook Assignment: "Drawings and Specifications," chapter 2, pages 2-1 through 2-26;
"Power Generation," chapter 3, pages 3-1 through 3-27.

- | | |
|--|--|
| <p>2-1. Planning, scheduling, and manpower and material estimating are based on the information contained in which of the following sources?</p> <ol style="list-style-type: none">1. Operating schedules2. Operating checks3. Maintenance records4. Blueprints | <p>2-5. What letters designate the title block for electrical and mechanical drawings?</p> <ol style="list-style-type: none">1. P and W2. E and M3. A and C4. E and S |
| <p>2-2. Diagrams and schematics are maps that indicate which of the following information?</p> <ol style="list-style-type: none">1. Configuration of circuits2. Circuit connections3. Components of electrical equipment4. Each of the above | <p>2-6. Blueprints are identified in the title block by which of the following methods?</p> <ol style="list-style-type: none">1. By a designation letter in the lower right-hand corner2. By a drawing number in the lower left-hand corner3. Both 1 and 2 above4. By a drawing number in the lower right-hand corner |
| <p>2-3. Diagrams and schematics are an invaluable aid when used properly for which of the following purposes?</p> <ol style="list-style-type: none">1. Project installation2. Electrical troubleshooting3. Repair of electrical components4. Each of the above | <p>2-7. The blueprint revision block is usually noted in what location?</p> <ol style="list-style-type: none">1. Upper right-hand corner2. Lower right-hand corner3. Upper left-hand corner4. Lower left-hand corner |
| <p>2-4. American National Standard Institute (ANSI) is the mandatory publication used by the Navy for graphic and wiring symbols.</p> <ol style="list-style-type: none">1. True2. False | <p>2-8. Original drawings are scaled accurately, but your drawing may be reduced slightly.</p> <ol style="list-style-type: none">1. True2. False |





2-9. The term “blueprint reading” means interpreting the ideas expressed by others.

1. True
2. False

2-10. The legend block on a blueprint defines what information?

1. Construction materials
2. Symbols and special marks
3. Equipment parts
4. The work schedules

2-11. Which of the following graphic symbols represents a duplex receptacle outlet, split-wired?

1. 
2. 
3. 
4. 
CEJA0029

2-12. The “bill of materials” block on a blueprint identifies parts and materials by stock number or other appropriate number and also lists the quantity used or required.

1. True
2. False

2-13. The standard procedure for supplementing construction drawings with written descriptions is known by what name?

1. NCF construction manual procedures
2. Project workmanship procedures
3. Fabrication specifications
4. Specifications

2-14. The specification standards for NCF construction projects are prepared by what authority?

1. CINCLANTFLT
2. NAVFACENGCOM
3. COMCBLANT
4. CINCPACFLT

2-15. The Naval Facilities Engineering Command prepares what type of specifications?

1. Federal
2. Military
3. NAVFAC
4. Project

2-16. Why are specifications important to a construction project?

1. They define instructions from the engineer
2. They eliminate possible misinterpretation and ensure positive control of the project
3. They show the time limits for each step of the project
4. They list the tools needed for the project

2-17. Federal specifications dictate what level of requirement?

1. Minimum
2. Satisfactory
3. Fully acceptable
4. Maximum

2-18. What type of specification designates technical requirements and tests for materials, products, and services used on a construction project?

1. Federal
2. Military
3. NAVFAC
4. Project





2-19. When there is conflicting information between the project drawings and project specifications, what decision should you make?

1. Ask the resident officer in charge of construction (ROICC) to clarify the information
2. Follow the project specifications
3. Follow the project drawings
4. Ask the operations department to clarify the information




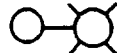
2-20. A directional symbol on a project blueprint is usually identified in what way?

1. By a circle labeled "S"
2. By a circle labeled "P"
3. By an arrow labeled "S"
4. By an arrow labeled "N"

2-21. Which of the following architectural symbols depicts wiring concealed in a floor?

1. 
2. 
3. 
4. 

2-22. Which of the following graphic symbols represents a power pole with a streetlight?

1. 
2. 
3. 
4. 
CEJA0031

2-23. Nonstandard symbol(s) is/are located under what drawing heading?

1. Title block
2. Legend
3. Notes
4. Bill of materials

2-24. What type of drawing is informal in character?

1. Customer drawing
2. Engineering drawing
3. Freehand sketches
4. Architectural drawings

- 2-25. What construction drawings are sometimes used interchangeably?
1. Preliminary and secondary
 2. Customer and designer
 3. Working and construction
 4. Architectural and engineering
- 2-26. Generally, working drawings are divided into a total of how many categories?
1. One
 2. Two
 3. Three
 4. Four
- 2-27. What is another name for a plot plan?
1. Floor plan
 2. Detail plan
 3. Sectional plan
 4. Site plan
- 2-28. What type of plan shows the changes in the surrounding area where buried cable or conduit will be located?
1. Floor plan
 2. Detail plan
 3. Sectional plan
 4. Site plan
- 2-29. What type of drawing represents a view of a finished structure?
1. Floor
 2. Elevation
 3. Section
 4. Detail
- 2-30. Mechanical drawings include which of the following drawing systems?
1. Refrigeration and air conditioning
 2. Heating and ventilating
 3. Water supply, sewage, and drainage
 4. Each of the above
- 2-31. What type of electrical diagram shows the relationship of major parts of a wiring circuit?
1. Isometric
 2. Block
 3. Wiring
 4. Connection
- 2-32. What type of electrical diagram shows the wiring between components and the relative position of the components?
1. Block
 2. Electrical
 3. Wiring
 4. Isometric
- 2-33. What type of electrical diagram is a valuable troubleshooting tool?
1. Connection
 2. Wiring
 3. Electrical
 4. Schematic
- 2-34. What type of electrical diagram uses symbols instead of pictures to show electrical connections?
1. Wiring
 2. Schematic
 3. Block
 4. Isometric

- 2-35. What noise level hazard is associated with the operation of a 60-kilowatt generator?
1. 50 dBa to 75 dBa, with no protection required
 2. 84 dBa to 91 dBa, needs single- or double-hearing protection
 3. 65 dBa to 83 dBa, with no protection required
 4. 84 dBa to 91 dBa, with no protection required
- 2-36. A generator supplying power for an advanced base should be in what location?
1. At the barracks site
 2. At the edge of the base
 3. At the point of smallest demand
 4. At the point of largest demand
- 2-37. Because of noise levels, fire hazards, and air circulation, Navy regulations require that you separate a generator from the load by at least how many feet?
1. 25
 2. 20
 3. 15
 4. 10
- 2-38. A generator should not be operated while inclined more than how many degrees from level?
1. 5°
 2. 10°
 3. 15°
 4. 25°
- 2-39. Paralleling generator sets must be within how many feet of each other?
1. 15
 2. 25
 3. 50
 4. 75
- 2-40. An auxiliary fuel supply must be located within how many feet of a generator?
1. 15
 2. 25
 3. 50
 4. 75
- 2-41. Which of the following pieces of information is NOT required by builders to construct a generator shelter?
1. Arrangement of the exhaust system
 2. Number of generators to be sheltered
 3. Size of the generators
 4. Electrical power load
- 2-42. What device(s), connected in parallel, permit(s) easy connection to batteries to supply power?
1. Battery release component
 2. Battery quick-release pin
 3. Power receptacle
 4. Two-slave receptacles

- 2-43. You are preparing your own electrolyte for a battery needed to start an advanced-base electric power generator. You are using an acid of 1.835 specific gravity and desire a specific gravity of 1.290. What proportion of (a) water to (b) acid should you use to achieve the desired specific gravity?
1. (a) 8 (b) 3
 2. (a) 11 (b) 3
 3. (a) 8 (b) 4
 4. (a) 11 (b) 4
- 2-44. The temperature of electrolyte placed in a battery should be within what temperature range?
1. 50°F to 90°F
 2. 60°F to 90°F
 3. 50°F to 100°F
 4. 60°F to 100°F
- 2-45. Before putting a battery freshly filled with electrolyte into service, you should let it stand for at least how long?
1. 5 min
 2. 20 min
 3. 1 hr
 4. 24 hr
- 2-46. When making battery connections on a generator set, you should always connect the negative battery terminals last.
1. True
 2. False
- 2-47. What type of charge is given to generator batteries as part of the normal maintenance routine?
1. Fast charge
 2. Equalizing
 3. Normal
- 2-48. When a battery is being charged, what substance is being released at (a) the positive plates and (b) the negative plates?
1. (a) Oxygen (b) hydrogen
 2. (a) Electrolyte (b) water
 3. (a) Hydrogen (b) oxygen
 4. (a) Water (b) electrolyte
- 2-49. When charging a battery, you should never allow the temperature of the electrolyte to exceed what maximum temperature?
1. 110°F
 2. 115°F
 3. 120°F
 4. 125°F
- 2-50. After using a hydrometer, you should flush it out with fresh water.
1. True
 2. False
- 2-51. The water coolant level of a generator radiator should be within how many inches of the top?
1. 1
 2. 2
 3. 3
 4. 4

- 2-52. After filling the radiator of a generator with a coolant, you should take which, if any, of the following actions?
1. Let the coolant sit in the radiator for a minimum of 1 hr before you start the generator set
 2. Fasten a tag near the radiator cap indicating the type and degree of protection the coolant provides
 3. Use an antifreeze solution tester to ensure the antifreeze content is sufficient for the existing temperature
 4. None of the above
- 2-53. The day tank on a generator serves which of the following functions?
1. It permits engine operation for at least an additional 12 min
 2. It provides a settling point for contaminants
 3. It provides an area for draining the fuel tank
 4. It permits engine operation for a minimum of 5 min
- 2-54. On a generator engine exhaust, what is the purpose of the hinged cap?
1. It provides information on how the engine is running
 2. It prevents birds from constructing nests in the exhaust system
 3. It prevents water from entering the exhaust system
 4. It enables the engine to be choked in an emergency
- 2-55. When grounding a generator with a driven metal rod (solid), you must ensure that the ground rod meets or exceeds which of the following standards?
1. It is embedded below the permanent moisture level
 2. It has a minimum diameter of 5/8 in.
 3. It is driven to a minimum depth of 8 ft
 4. Both 2 and 3 above
- 2-56. When connecting the ground rod to the generator set, you should use a ground lead of at least what minimum size?
1. 6 AWG
 2. 8 AWG
 3. 10 AWG
 4. 12 AWG
- 2-57. The NEC states that if you are using a single ground rod to ground a generator set, it must have what maximum resistance to ground?
1. 25 ohms
 2. 30 ohms
 3. 35 ohms
 4. 40 ohms
- 2-58. In cold weather locations where multiple ground rods are needed to bring the resistance down to the correct ohm reading, the rods should be separated by what minimum distance?
1. 8 ft
 2. 2 ft
 3. 6 ft
 4. 4 ft

2-59. How should you convert generator voltage output from 120/208 volts to 240/416 volts?

1. By transposing any two wires on the load terminal block
2. By positioning the voltage change board to the voltage desired
3. By flipping one of the change boards over and installing it for the voltage desired
4. By installing a transformer for the desired voltage

2-60. You are instructed to check the phase sequence of an incoming alternator and make the hookup. After you connect phase sequence meter lead A to X_1 , B to Y_1 , and C to Z_1 , the meter rotates counterclockwise. When you connect meter lead A to X, B to Y, and C to Z, the meter rotates clockwise. What are the correct hookup connections?

1. X to X_1 , Y to Y_1 , and Z to Z_1
2. Z to X_1 , Y to Z_1 , and X to Y_1
3. X to Y_1 , Y to X_1 , and Z to Z_1
4. X to Z_1 , Y to X_1 , and Z to Y_1

2-61. When inspecting a generator, you should check which of the following fluid levels?

1. Fuel
2. Radiator coolant
3. Crankcase lubricant
4. Each of the above

2-62. Which of the following devices can be used to ring out unmarked conductors in a conduit?

1. Ohmmeter
2. Bell and battery
3. Buzzer and battery
4. Each of the above

2-63. One purpose for keeping a generator station log is to help determine when a particular piece of equipment needs preventive maintenance.

1. True
2. False

2-64. A generator station log must contain descriptions of not only the hourly performance of the generator but also the performance of all controlling and indicating devices of the equipment.

1. True
2. False

IN ANSWERING QUESTION 2-65, REFER TO FIGURE 3-19 IN THE TEXT.

2-65. The generator control cubicle is divided into an engine section and what other section?

1. Indicator
2. Generator
3. Production
4. Paralleling

2-66. When starting a generator set, you note that the air cleaner condition indicator lamp is ht. What does this indicate?

1. The generator has not yet cranked
2. The louvers are not open
3. The air cleaner is functioning properly
4. The air cleaner requires servicing

2-67. Normally, a generator should be allowed to warm up what minimum length of time before a load is applied?

1. 1-2 min
2. 3-4 min
3. 5 min
4. 10 min

2-68. When the generator kilowatt meter indicates that more than the rated kilowatts are being consumed, what action, if any, should you take?

1. Open the circuit breaker
2. Rotate the voltage adjustment control
3. Reduce the load
4. None

2-69. When you notice a significant change in the coolant temperature of a generator that is in operation, what action should you take?

1. Reduce the load
2. Notify maintenance personnel
3. Remove the generator from the line
4. Check the operator's log to see if this is a recurring event

2-70. Before one or more ac generators may be operated in parallel to feed a single bus, the output must be carefully matched in all of the following characteristics except which one?

1. Current
2. Frequency
3. Phase relationship
4. Voltage

2-71. When you attempt to parallel two generators and the main circuit breaker opens on either generator, what is the most probable cause?

1. The phase sequence or voltage levels are incorrect
2. The output is slightly out of phase
3. The incoming generator is defective
4. The incoming generator is losing speed

2-72. During paralleling operations, the synchronizing lights do not blink on and off in unison. What is the most probable cause?

1. Voltage levels to the two generators are not the same
2. The phase sequence is not correct
3. The incoming generator is defective

2-73. An outgoing generator should run with no load for about what length of time before you shut it off?

1. 1-2 min
2. 3-4 min
3. 5 min
4. 10 min

2-74. Testing and replacement of faulty generator components are included in what category of maintenance?

1. Depot
2. Intermediate
3. Routine
4. Organizational

2-75. What is the purpose of generator preventive maintenance?

1. To provide accurate records on each individual generator
2. To eliminate problems for the generator operator
3. To provide jobs for maintenance personnel
4. To keep the generator running trouble-free